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WordWall Application as an Interactive Learning Media in Mastering English Vocabulary at Elementary School

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Keywords

“wordwall”; “learning media”; “interactive learning”; “vocabulary”; “Games”

WordWall Application as an Interactive Learning Media in Mastering English Vocabulary at Elementary School

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Abstract. This study aims to determine the effect of using a wordwall application to improve English vocabulary mastery of elementary school students in Garut. The method used is an experimental research method using a quantitative approach. Because this research requires treatment to find out the effect of WordWall Media on Students' English Vocabulary Mastery. The data sources in this study is the fourth grade students of SDN 1 Kota Kulon, Garut that consist of 20 students. The researcher uses the type of one group pretest and posttest design, because this design is carried out on one group without a control or comparison group. Based on the results of the pre-test and post-test data calculations, the 2-tailed value was 0.000 with a significance level of 5% ($\alpha = 0.05$). Meanwhile, hypothesis testing criteria: If the significance value (2-tailed) < 0.05, then H_o is rejected and H_a is accepted. Therefore Ho is rejected and Ha is accepted. This indicates that the students' mastery of English vocabulary is increasing. With 90% or 18 people who have not reached the KKM and 10% or 2 people who have reached the KKM at the time of empirical data collection. And after the authors conducted research using WordWall media there was an increase of 65% or 13 students who had reached the KKM and 35% or 7 students who had not reached the KKM. In other words, there is an influence of WordWall media on English vocabulary mastery of fourth grade students of SDN 1 Kota Kulon.

Keywords: "wordwall" · "learning media" · "interactive learning" · "vocabulary" · "Games"

1 Introduction

In learning English, it is necessary to have the ability to understand and master English vocabulary. By mastering many English vocabulary, students will not have difficulties in learning English. It will make it easier to learn English both in terms of communication and language skills. Therefore, English subjects, especially in the field of basic education,

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are more focused on students' ability to master English vocabulary such as knowing letters, numbers, animal names, etc. so that students can learn English and speak fluently. One of the problems in learning English in elementary schools in Garut is the lack of creativity of teachers in using learning methods and media so that the mastery of English vocabulary in elementary school students is very low.

One of the suitable learning media to improve students' English vocabulary mastery is WordWall media. According to Aribowo (2021), WordWall is a website-based application which can be used to create learning media such as quizzes, matchmaking, pairing, anagrams, word randomization, word search, grouping, etc. WordWall media is one of the fun and suitable learning media to improve students' vocabulary mastery because it has various interesting features so that students can play an active role during the learning process. According to Widikasih (2008, p. 4) states that WordWall has several advantages, namely; 1) supports the development of students' vocabulary and spelling that can help them in writing activities, 2) contains references that support their writing during English lessons. This advantage will help students who have difficulty in conveying their ideas in writing, 3) This media can also help students in developing paragraphs because WordWall is organized based on ideas related to the given theme, 4) This media also provides many activities that allow students to practice write instantly and automatically.

So it can be concluded that WordWall media is a learning media in the form of a website application in which there are various games that can be adapted to the needs and material to be delivered, besides that this media can also be used as a learning evaluation tool. This is in accordance with the statement of Sun'iyah (2020) which states that the wordwall is oriented to the evaluation of learning that can be adapted to the material, class, students and provides alternative variations in the teacher's teaching style.

In addition, there are several types of game templates that can be used in WordWall (Fig. 1).

The following picture is an example of one of the game looks in the wordwall application (Fig. 2).

The use of interactive learning media such as wordwall applications will attract students' attention so that they are more enthusiastic in participating the learning process. This application can be used to create learning media such as quizzes, matchmaking, pairing, anagrams, random words, word searches, grouping, etc. This study aims to

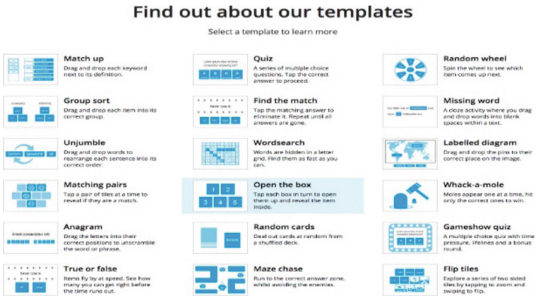

Fig. 1. Templete Game in Wordwall

Fig. 2. Game in Wordwall Application

determine the effect of using a wordwall application to improve English vocabulary mastery of elementary school students in Garut.

2 Research Method

The method used is an experimental research method using a quantitative approach. Because this research requires treatment to find out the effect of WordWall Media on Students' English Vocabulary Mastery. The data sources in this study is the fourth grade students of SDN 1 Kota Kulon, Garut that consist of 20 students.

The researcher uses the type of one group pretest and posttest design, because this design is carried out on one group without a control or comparison group (Table 1).

O_1 = Pretest score before treatment

X = Treatment using wordwall media

O_2 = Posttest after treatment

Experimental research method is a research method that is used to find the effect of something that is treated on another under controlled conditions. The quasi-experimental uses all subjects in the study group (intact group) to be given treatment (treatment), not using subjects taken at random. In this study, researchers used WordWall media to determine its effect on students' English vocabulary mastery in grade IV SDN Kota Kulon Garut.

2.1 Research Instrument

The instrument used in this research is a written test which will be given to students in the form of multiple choice and essay. In this activity the researcher carried out two tests,

Table. 1. One Group Pretest and Posttest Design

O_1 X O_2

namely a pre-test which was carried out by giving multiple choice practice questions and descriptions related to students' English vocabulary which aimed to determine the extent to which students mastered English vocabulary. The next post-test is to determine the students' mastery of English vocabulary after being given treatment using WordWall media. Before conducting the pre-test, the instrument will be tested on a class above its level.

2.2 Data Collection and Analysis Techniques

Data Analysis Technique divided into two things, they are:

2.2.1 Validation of Test Instruments

Before being used, the test is tested first to find out the validity, the level of difficulty, the difference and reliability.

2.2.2 Data Processing Techniques

After the data is collected, the next step is to analyze the data, while the steps to analyze the data are as follows: 1) Descriptive Statistics, 2) Normality Test, 3) Homogenity Test, 4) Hypothesis Test, 5) Normalized Gain Test.

3 Result and Discussion

3.1 Data Analysis

3.1.1 Students' English Vocabulary Mastery Ability Before Using WordWall Media

Data was obtained from the results of the pre-test which was carried out at the beginning of the study. This data is the original value obtained by the students, which means that there has been no additional formative value or any value from the teacher. This data is used as an initial guideline, to find out students' abilities in mastering English vocabularies. The data on the results of the students' pre-test based on the achievement of KKM (standar score) completeness will be presented in the following Table 2.

It can be seen in the Table 2, from the 20 students from the pre-test results, 18 students who have not completed or have not reached the KKM and 2 students who have completed the test have reached the KKM. Based on the table above, it can be seen that almost all students (2 out of 20 students) are still in the unfinished category or under the KKM (70), as well as the average results from class IV which are quite far from the KKM (Table 3).

From class IV, 2 students or 10% have completed the KKM. While the results of the average grade IV students were 51.75.

Furthermore, to be clearer regarding the acquisition of pre-test scores from class IV, the researcer will present a comparison of the size of the concentration and distribution of class data as follows (Table 4).

Table 2. Pretest Score Result

Students	*Pre-test Score*	KKM	Category
1	34	70	Not Completed
2	55	70	Not Completed
3	37	70	Not Completed
4	44	70	Not Completed
5	72	70	Completed
6	51	70	Not Completed
7	68	70	Not Completed
8	55	70	Not Completed
9	41	70	Not Completed
10	34	70	Not Completed
11	58	70	Not Completed
12	48	70	Not Completed
13	37	70	Not Completed
14	55	70	Not Completed
15	62	70	Not Completed
16	72	70	Completed
17	58	70	Not Completed
18	41	70	Not Completed
19	62	70	Not Completed
20	51	70	Not Completed

Table 3. Achievement of KKM Pretest Result Data

	Completed	Not Completed
N	2	18
%	10%	90%
X	51,75	

3.1.2 Students' English Vocabulary Mastery Ability After Using WordWall Media

Students' English vocabulary mastery after using WordWall media was obtained through post-test data which is presented in the following Table 5.

Based on the table above, in class IV there are 7 students who have not completed or have not reached the KKM and 13 students have completed or have reached the KKM. The results of 20 students in class IV, it can be concluded that the results of the Post-test

Table 4. Measures of Concentration and Distribution of Pre-test Data

No.	Concentration and Distribution Data	Experiment Statistic Data	Resource
1	N	20	*SPSS* V 25.0
2	Sum	1.035	
3	Lowest score	34	
4	Highest score	72	
5	Mean	51,75	
6	Median	53	
7	Modus	55	
8	Varians	138,79	
9	Standard Deviation	11,78	

scores for class IV are 7 students who have not reached the KKM and 13 students have reached the KKM. For more details, it is in the following (Table 6) (Table 7).

3.1.3 Mean and Standart Deviation

The standard deviation is the most common measure of statistical distribution. It measures how data values are dispersed. It can also be formulated as, the average storage distance of data points measured from the average value of the data. The results of the calculation of the average value and standard deviation can be seen in the following Table 8.

3.1.4 Normality Test

Normality test aims to determine whether each variable is normally distributed or not. To test whether the data is normally distributed or not, the Statistical Lilliefors Test was carried out. The residual is normally distributed if it has a significance value > 0.05. The results of the normality test using the SPSS V.25 (Table 9).

3.1.5 Homogenity Test

Homogenity test is to know whether variants distributions are equal. Homogeneity test is usually used as a requirement in independent analysis of T-Test and ANOVA samples.

It can be seen from the Table 10, the results of the homogenity Pre-test obtained a significance value $>$ from 0.05, which is 0.200. Then for the results of the homogenity Post-test the significance value was obtained $>$ from 0.05, namely 0.107. It can be concluded that the two variances are homogeneously distributed.

Table 5. Post-test Score Result

Students	***Post-test Score***	**KKM**	**Category**
1	44	70	Not Completed
2	79	70	Completed
3	58	70	Not Completed
4	72	70	Completed
5	89	70	Completed
6	79	70	Completed
7	86	70	Completed
8	75	70	Completed
9	65	70	Not Completed
10	55	70	Not Completed
11	72	70	Completed
12	62	70	Not Completed
13	58	70	Not Completed
14	72	70	Completed
15	75	70	Completed
16	93	70	Completed
17	75	70	Completed
18	58	70	Not Completed
19	82	70	Completed
20	75	70	Completed

Table 6. Achievement of KKM Post-test Result Data

	Completed	Not Completed
N	13	17
%	65%	35%
X	71,2	

3.1.6 T- Test

After doing the normality test and homogeneity test, then proceed to the t-test to find out how much influence WordWall Media has on English vocabulary mastery of fourth graders students of SDN 1 Kota Kulon.

The basic decision making in the t- test are:

1) If the significance value (2-tailed) < 0.05, then H_o is rejected and H_a is accepted.

Table 7. Measures of Concentration and Distribution of Post-test Data

No.	Concentration and Distribution Data	Experiment Statistic Data	Resource
1	N	20	*SPSS* V 25.0
2	Sum	1424	
3	Lowest score	44	
4	Highest score	89	
5	Mean	71,2	
6	Median	59,5	
7	Modus	75	
8	Varians	147,86	
9	Standard Deviation	12,16	

Table 8. Mean and Standart Deviation

Test	Mean	Standard Deviation
Pre-test	51,75	11,78
Post-test	71,2	12,16

Table 9. Normality Test Result

Test Period	*Asymp.Sig (2-tailed)*	Level Signification	Description
Pre-test	0,200	0,05	Normal
Post-test	0,107	0,05	Normal

Table 10. Homogenity Test of Pre-test and Post-test

Periode Test	Variant	Signification value	Signification level	Description
Pre-Test	138,79	0,200	0,05	Homogen
Post-Test	147,86	0,107		

2) If the significance value (2-tailed) > 0.05, then H_o is accepted and H_a is rejected. Here are the results of testing both Pre-test and Post-test data: (Table 11).

Table 11. t-Test Result of Pre-test and Post-test.

Test Period	*Asymp.Sig (2-tailed)*	*Signification level*	Description	Source
Pre-test	0,000	0,05	Accepted	*SPSS* V 25.0
Post-test				

Table 12. Data Description N-Gain

Test Period	Mean	N-Gain	Interpretation	Source
Pre-test	51,72	0,42	Moderate	*SPSS* V 25.0
Post-test	71,20			

3.1.7 N-Gain Test Result

Gain test is the difference between the pre-test and the post-test, the gain shows an increase in students' understanding or mastery of English vocabulary after learning is carried out by the teacher. The amount of increase before and after learning is calculated by the normalized gain formula developed by Hake (1999) using the SPSS V.25 application

Based on the Table 12, it can be seen that there is a difference in the results of the pre-test and post-test due to an increase in the results of the post-test with a normalized gain value of 0.42, which means the increase is in the moderate category.

3.2 Discussion

In applying application wordwall media in learning English with the material about Fruits and Vegetables with the aim of improving students' English vocabulary mastery the response of students who are very enthusiastic because the display of the media is in the form of a game, this can prove that the existence of learning media can generate student learning motivation, provide learning stimulus, and make students more active, this is in accordance with the six functions of learning media proposed by Rowntree (in Miftah 2013), namely; 1) generate learning motivation; 2) repeat what has been learned; 3) provide a learning stimulus; 4) activate student responses; 5) provide immediate feedback; 6) promote coherent exercise.

Media WordWall according to Aribowo (2021) said that WordWall is a website-based application that can be used to create learning media such as quizzes, matchmaking, pairing pairs, anagrams, word shuffle, word search, grouping, etc. According to Khairunisa (2021), WordWall is a digital gamification-based application with various game and quiz features that can be used by educators. It can be said that WordWall media is a learning media in the form of a website-based application in which there are various types of games that can be adapted to the learning material to be delivered.

Before carrying out learning, students do an initial test (pre-test) first then continue with learning using WordWall media, after that students take a final test. The initial

test was conducted to determine the students' initial abilities and the final test was to determine the students' abilities after being given treatment using WordWall media. Based on the data from the pre-test and post-test results that have been processed, it is found that the two data are normally distributed and homogeneous. So that in the next statistical test the t test is used. From t- test, the results obtained 2-tailed 0.000 < from 0.05, namely the results of the t-test obtained 2-tailed is smaller than the significant level, then H_o is rejected and H_a is accepted, thus indicate that there is an influence of WordWall media on student's English vocabulary mastery.

Furthermore, to find out the increase in mastering of English vocabulary before and after learning using WordWall media, a normalized gain test was carried out. The results of the normalized gain test have a significant increase. This can be seen from the difference in the results of the pre-test and post-test because there is an increase in the results of the post-test with a normalized gain value of 0.42, which means that the increase is in the moderate category.

As the results of research and testing, the researcher can conclude that the results of learning activities have a significant difference between the initial test and the final test. The results of this study showed that students' English vocabulary mastery increased after being given treatment using WordWall media. This proves that WordWall media has an effect on students' English vocabulary mastery because WordWall media is a learning medium that interesting and interactive. It can involve students directly in learning activity.

The benefits of this research can be used as reference material or as a fun learning media to improve student learning outcomes, especially in students' English vocabulary mastery. In addition, this research can be used as consideration for schools to improve student learning outcomes in the process of learning English in schools using WordWall learning media.

4 Conclusion

Based on the results of the analysis and discussion of the data, the researchers obtained conclusions about Effect of WordWall Media on the Mastery of English Vocabulary of Fourth Grade Students of SDN 1 Kota Kulon, there is an influence of WordWall media on students' English vocabulary mastery. Based on the results of the pre-test and post-test data calculations, the 2-tailed value was 0.000 with a significance level of 5% ($\alpha = 0.05$). Meanwhile, hypothesis testing criteria: If the significance value (2-tailed) < 0.05, then H_o is rejected and H_a is accepted. Therefore Ho is rejected and Ha is accepted. This indicates that the students' mastery of English vocabulary is increasing. With 90% or 18 people who have not reached the KKM and 10% or 2 people who have reached the KKM at the time of empirical data collection. And after the authors conducted research using WordWall media there was an increase of 65% or 13 students who had reached the KKM and 35% or 7 students who had not reached the KKM. In other words, there is an influence of WordWall media on English vocabulary mastery of fourth grade students of SDN 1 Kota Kulon. Based on the result above, it can be conclude that wordwall

media is an interesting, interactive learning media and can increase student motivation in learning.

Authors' Contributions

Type of distribution	Description	Contributors
Conception	Constructing an idea or hypothesis for research and/or manuscript	Yennie, Neni, Nizar, Syifa, Nindy
Design	Planning methodology to reach the conclusion	Yennie, Neni, Syifa
Supervision	Organising and supervising the course of the project or the article and taking the responsibility	Yennie, Nizar
Funding	Providing personnel, environmental and financial support and tools and instruments that are vital for the project	Nizar
Data Collection	Taking responsibility in execution of the experiments, patient follow-up, data management and reporting	Yennie, Neni, Syifa, Nindy
Analysis	Taking responsibility in logical interpretation and presentation of the results	Yennie, Neni, Syifa, Nindy
Literature review	Taking responsibility in this necessary function	Yennie, Neni, Syifa, Nindy
Writer	Taking responsibility in the construction of the whole or body of the manuscript	Yennie, Neni, Syifa,
Critical review	Reviewing the article before submission not only for spelling and grammar but also for its intellectual content.	Yennie, Neni, Nizar, Syifa, Nindy

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WordWall Application as an Interactive Learning Media in Mastering English Vocabulary at Elementary School

by Nizar Alam Hamdani

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are more focused on students' ability to master English vocabulary such as knowing letters, numbers, animal names, etc. so that students can learn English and speak fluently. One of the problems in learning English in elementary schools in Garut is the lack of creativity of teachers in using learning methods and media so that the mastery of English vocabulary in elementary school students is very low.

One of the suitable learning media to improve students' English vocabulary mastery is WordWall media. According to Aribowo (2021), WordWall is a website-based application which can be used to create learning media such as quizzes, matchmaking, pairing, anagrams, word randomization, word search, grouping, etc. WordWall media is one of the fun and suitable learning media to improve students' vocabulary mastery because it has various interesting features so that students can play an active role during the learning process. According to Widikasih (2008, p. 4) states that WordWall has several advantages, namely; 1) supports the development of students' vocabulary and spelling that can help them in writing activities, 2) contains references that support their writing during English lessons. This advantage will help students who have difficulty in conveying their ideas in writing, 3) This media can also help students in developing paragraphs because WordWall is organized based on ideas related to the given theme, 4) This media also provides many activities that allow students to practice write instantly and automatically.

So it can be concluded that WordWall media is a learning media in the form of a website application in which there are various games that can be adapted to the needs and material to be delivered, besides that this media can also be used as a learning evaluation tool. This is in accordance with the statement of Sun'iyah (2020) which states that the wordwall is oriented to the evaluation of learning that can be adapted to the material, class, students and provides alternative variations in the teacher's teaching style.

In addition, there are several types of game templates that can be used in WordWall (Fig. 1).

The following picture is an example of one of the game looks in the wordwall application (Fig. 2).

The use of interactive learning media such as wordwall applications will attract students' attention so that they are more enthusiastic in participating the learning process. This application can be used to create learning media such as quizzes, matchmaking, pairing, anagrams, random words, word searches, grouping, etc. This study aims to

Fig. 1. Templete Game in Wordwall

Fig. 2. Game in Wordwall Application

determine the effect of using a wordwall application to improve English vocabulary mastery of elementary school students in Garut.

2 Research Method

The method used is an experimental research method using a quantitative approach. Because this research requires treatment to find out the effect of WordWall Media on Students' English Vocabulary Mastery. The data sources in this study is the fourth grade students of SDN 1 Kota Kulon, Garut that consist of 20 students.

The researcher uses the type of one group pretest and posttest design, because this design is carried out on one group without a control or comparison group (Table 1).

O_1 = Pretest score before treatment

X = Treatment using wordwall media

O_2 = Posttest after treatment

Experimental research method is a research method that is used to find the effect of something that is treated on another under controlled conditions. The quasi-experimental uses all subjects in the study group (intact group) to be given treatment (treatment), not using subjects taken at random. In this study, researchers used WordWall media to determine its effect on students' English vocabulary mastery in grade IV SDN Kota Kulon Garut.

2.1 Research Instrument

The instrument used in this research is a written test which will be given to students in the form of multiple choice and essay. In this activity the researcher carried out two tests,

Table. 1. One Group Pretest and Posttest Design

O_1 X O_2

namely a pre-test which was carried out by giving multiple choice practice questions and descriptions related to students' English vocabulary which aimed to determine the extent to which students mastered English vocabulary. The next post-test is to determine the students' mastery of English vocabulary after being given treatment using WordWall media. Before conducting the pre-test, the instrument will be tested on a class above its level.

2.2 Data Collection and Analysis Techniques

Data Analysis Technique divided into two things, they are:

2.2.1 Validation of Test Instruments

Before being used, the test is tested first to find out the validity, the level of difficulty, the difference and reliability.

2.2.2 Data Processing Techniques

After the data is collected, the next step is to analyze the data, while the steps to analyze the data are as follows: 1) Descriptive Statistics, 2) Normality Test, 3) Homogenity Test, 4) Hypothesis Test, 5) Normalized Gain Test.

3 Result and Discussion

3.1 Data Analysis

3.1.1 Students' English Vocabulary Mastery Ability Before Using WordWall Media

Data was obtained from the results of the pre-test which was carried out at the beginning of the study. This data is the original value obtained by the students, which means that there has been no additional formative value or any value from the teacher. This data is used as an initial guideline, to find out students' abilities in mastering English vocabularies. The data on the results of the students' pre-test based on the achievement of KKM (standar score) completeness will be presented in the following Table 2.

It can be seen in the Table 2, from the 20 students from the pre-test results, 18 students who have not completed or have not reached the KKM and 2 students who have completed the test have reached the KKM. Based on the table above, it can be seen that almost all students (2 out of 20 students) are still in the unfinished category or under the KKM (70), as well as the average results from class IV which are quite far from the KKM (Table 3).

From class IV, 2 students or 10% have completed the KKM. While the results of the average grade IV students were 51.75.

Furthermore, to be clearer regarding the acquisition of pre-test scores from class IV, the researcer will present a comparison of the size of the concentration and distribution of class data as follows (Table 4).

Table 2. Pretest Score Result

Students	*Pre-test Score*	KKM	Category
1	34	70	Not Completed
2	55	70	Not Completed
3	37	70	Not Completed
4	44	70	Not Completed
5	72	70	Completed
6	51	70	Not Completed
7	68	70	Not Completed
8	55	70	Not Completed
9	41	70	Not Completed
10	34	70	Not Completed
11	58	70	Not Completed
12	48	70	Not Completed
13	37	70	Not Completed
14	55	70	Not Completed
15	62	70	Not Completed
16	72	70	Completed
17	58	70	Not Completed
18	41	70	Not Completed
19	62	70	Not Completed
20	51	70	Not Completed

Table 3. Achievement of KKM Pretest Result Data

	Completed	Not Completed
N	2	18
%	10%	90%
X	51,75	

3.1.2 Students' English Vocabulary Mastery Ability After Using WordWall Media

Students' English vocabulary mastery after using WordWall media was obtained through post-test data which is presented in the following Table 5.

Based on the table above, in class IV there are 7 students who have not completed or have not reached the KKM and 13 students have completed or have reached the KKM. The results of 20 students in class IV, it can be concluded that the results of the Post-test

Table 4. Measures of Concentration and Distribution of Pre-test Data

No.	Concentration and Distribution Data	Experiment Statistic Data	Resource
1	N	20	*SPSS* V 25.0
2	Sum	1.035	
3	Lowest score	34	
4	Highest score	72	
5	Mean	51,75	
6	Median	53	
7	Modus	55	
8	Varians	138,79	
9	Standard Deviation	11,78	

scores for class IV are 7 students who have not reached the KKM and 13 students have reached the KKM. For more details, it is in the following (Table 6) (Table 7).

3.1.3 Mean and Standart Deviation

The standard deviation is the most common measure of statistical distribution. It measures how data values are dispersed. It can also be formulated as, the average storage distance of data points measured from the average value of the data. The results of the calculation of the average value and standard deviation can be seen in the following Table 8.

3.1.4 Normality Test

Normality test aims to determine whether each variable is normally distributed or not. To test whether the data is normally distributed or not, the Statistical Lilliefors Test was carried out. The residual is normally distributed if it has a significance value > 0.05. The results of the normality test using the SPSS V.25 (Table 9).

3.1.5 Homogenity Test

Homogenity test is to know whether variants distributions are equal. Homogeneity test is usually used as a requirement in independent analysis of T-Test and ANOVA samples.

It can be seen from the Table 10, the results of the homogenity Pre-test obtained a significance value > from 0.05, which is 0.200. Then for the results of the homogenity Post-test the significance value was obtained > from 0.05, namely 0.107. It can be concluded that the two variances are homogeneously distributed.

Table 5. Post-test Score Result

Students	***Post-test Score***	**KKM**	**Category**
1	44	70	Not Completed
2	79	70	Completed
3	58	70	Not Completed
4	72	70	Completed
5	89	70	Completed
6	79	70	Completed
7	86	70	Completed
8	75	70	Completed
9	65	70	Not Completed
10	55	70	Not Completed
11	72	70	Completed
12	62	70	Not Completed
13	58	70	Not Completed
14	72	70	Completed
15	75	70	Completed
16	93	70	Completed
17	75	70	Completed
18	58	70	Not Completed
19	82	70	Completed
20	75	70	Completed

Table 6. Achievement of KKM Post-test Result Data

	Completed	Not Completed
N	13	17
%	65%	35%
X	71,2	

3.1.6 T- Test

After doing the normality test and homogeneity test, then proceed to the t-test to find out how much influence WordWall Media has on English vocabulary mastery of fourth graders students of SDN 1 Kota Kulon.

The basic decision making in the t- test are:

1) If the significance value (2-tailed) < 0.05, then H_o is rejected and H_a is accepted.

Table 7. Measures of Concentration and Distribution of Post-test Data

No.	Concentration and Distribution Data	Experiment Statistic Data	Resource
1	N	20	*SPSS* V 25.0
2	Sum	1424	
3	Lowest score	44	
4	Highest score	89	
5	Mean	71,2	
6	Median	59,5	
7	Modus	75	
8	Varians	147,86	
9	Standard Deviation	12,16	

Table 8. Mean and Standart Deviation

Test	Mean	Standard Deviation
Pre-test	51,75	11,78
Post-test	71,2	12,16

Table 9. Normality Test Result

Test Period	*Asymp.Sig (2-tailed)*	Level Signification	Description
Pre-test	0,200	0,05	Normal
Post-test	0,107	0,05	Normal

Table 10. Homogenity Test of Pre-test and Post-test

Periode Test	Variant	Signification value	Signification level	Description
Pre-Test	138,79	0,200	0,05	Homogen
Post-Test	147,86	0,107		

2) If the significance value (2-tailed) > 0.05, then H_o is accepted and H_a is rejected. Here are the results of testing both Pre-test and Post-test data: (Table 11).

Table 11. t-Test Result of Pre-test and Post-test.

Test Period	*Asymp.Sig (2-tailed)*	*Signification level*	Description	Source
Pre-test	0,000	0,05	Accepted	*SPSS* V 25.0
Post-test				

Table 12. Data Description N-Gain

Test Period	Mean	N-Gain	Interpretation	Source
Pre-test	51,72	0,42	Moderate	*SPSS* V 25.0
Post-test	71,20			

3.1.7 N-Gain Test Result

Gain test is the difference between the pre-test and the post-test, the gain shows an increase in students' understanding or mastery of English vocabulary after learning is carried out by the teacher. The amount of increase before and after learning is calculated by the normalized gain formula developed by Hake (1999) using the SPSS V.25 application

Based on the Table 12, it can be seen that there is a difference in the results of the pre-test and post-test due to an increase in the results of the post-test with a normalized gain value of 0.42, which means the increase is in the moderate category.

3.2 Discussion

In applying application wordwall media in learning English with the material about Fruits and Vegetables with the aim of improving students' English vocabulary mastery the response of students who are very enthusiastic because the display of the media is in the form of a game, this can prove that the existence of learning media can generate student learning motivation, provide learning stimulus, and make students more active, this is in accordance with the six functions of learning media proposed by Rowntree (in Miftah 2013), namely; 1) generate learning motivation; 2) repeat what has been learned; 3) provide a learning stimulus; 4) activate student responses; 5) provide immediate feedback; 6) promote coherent exercise.

Media WordWall according to Aribowo (2021) said that WordWall is a website-based application that can be used to create learning media such as quizzes, matchmaking, pairing pairs, anagrams, word shuffle, word search, grouping, etc. According to Khairunisa (2021), WordWall is a digital gamification-based application with various game and quiz features that can be used by educators. It can be said that WordWall media is a learning media in the form of a website-based application in which there are various types of games that can be adapted to the learning material to be delivered.

Before carrying out learning, students do an initial test (pre-test) first then continue with learning using WordWall media, after that students take a final test. The initial

test was conducted to determine the students' initial abilities and the final test was to determine the students' abilities after being given treatment using WordWall media. Based on the data from the pre-test and post-test results that have been processed, it is found that the two data are normally distributed and homogeneous. So that in the next statistical test the t test is used. From t- test, the results obtained 2-tailed 0.000 < from 0.05, namely the results of the t-test obtained 2-tailed is smaller than the significant level, then H_o is rejected and H_a is accepted, thus indicate that there is an influence of WordWall media on student's English vocabulary mastery.

Furthermore, to find out the increase in mastering of English vocabulary before and after learning using WordWall media, a normalized gain test was carried out. The results of the normalized gain test have a significant increase. This can be seen from the difference in the results of the pre-test and post-test because there is an increase in the results of the post-test with a normalized gain value of 0.42, which means that the increase is in the moderate category.

As the results of research and testing, the researcher can conclude that the results of learning activities have a significant difference between the initial test and the final test. The results of this study showed that students' English vocabulary mastery increased after being given treatment using WordWall media. This proves that WordWall media has an effect on students' English vocabulary mastery because WordWall media is a learning medium that interesting and interactive. It can involve students directly in learning activity.

The benefits of this research can be used as reference material or as a fun learning media to improve student learning outcomes, especially in students' English vocabulary mastery. In addition, this research can be used as consideration for schools to improve student learning outcomes in the process of learning English in schools using WordWall learning media.

4 Conclusion

Based on the results of the analysis and discussion of the data, the researchers obtained conclusions about Effect of WordWall Media on the Mastery of English Vocabulary of Fourth Grade Students of SDN 1 Kota Kulon, there is an influence of WordWall media on students' English vocabulary mastery. Based on the results of the pre-test and post-test data calculations, the 2-tailed value was 0.000 with a significance level of 5% ($\alpha = 0.05$). Meanwhile, hypothesis testing criteria: If the significance value (2-tailed) < 0.05, then H_o is rejected and H_a is accepted. Therefore Ho is rejected and Ha is accepted. This indicates that the students' mastery of English vocabulary is increasing. With 90% or 18 people who have not reached the KKM and 10% or 2 people who have reached the KKM at the time of empirical data collection. And after the authors conducted research using WordWall media there was an increase of 65% or 13 students who had reached the KKM and 35% or 7 students who had not reached the KKM. In other words, there is an influence of WordWall media on English vocabulary mastery of fourth grade students of SDN 1 Kota Kulon. Based on the result above, it can be conclude that wordwall

media is an interesting, interactive learning media and can increase student motivation in learning.

Authors' Contributions

Type of distribution	Description	Contributors
Conception	Constructing an idea or hypothesis for research and/or manuscript	Yennie, Neni, Nizar, Syifa, Nindy
Design	Planning methodology to reach the conclusion	Yennie, Neni, Syifa
Supervision	Organising and supervising the course of the project or the article and taking the responsibility	Yennie, Nizar
Funding	Providing personnel, environmental and financial support and tools and instruments that are vital for the project	Nizar
Data Collection	Taking responsibility in execution of the experiments, patient follow-up, data management and reporting	Yennie, Neni, Syifa, Nindy
Analysis	Taking responsibility in logical interpretation and presentation of the results	Yennie, Neni, Syifa, Nindy
Literature review	Taking responsibility in this necessary function	Yennie, Neni, Syifa, Nindy
Writer	Taking responsibility in the construction of the whole or body of the manuscript	Yennie, Neni, Syifa,
Critical review	Reviewing the article before submission not only for spelling and grammar but also for its intellectual content.	Yennie, Neni, Nizar, Syifa, Nindy

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